

ON *POLYPTYCHUS PYGARGA* AND SOME ALLIED SPECIES
(LEP., SPHINGIDAE).

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(With 12 text-figures.)

THE 6 species dealt with in this paper are all African and resemble each other very closely. They are characterized by the head and thorax being devoid of a dark dorsal median stripe, the forewing subfalcate, with a discocellular ring-mark, the apex produced and the distal margin entire, the hindwing bearing two dark spots at anal angle and, between them and base parallel with abdominal margin, a dark streak. ♂: anal tergite with simple median process, or the process bearing on each side a wing-like upward projection; anal sternite absent; clasper and inside of tergite VIII without friction-scales; penis-sheath with apical or subapical belt, or patch, of teeth, without long process. ♀: darker than ♂, less grey, more clay-colour. Tergite VIII medianly divided, the two halves smooth, thin, but well chitinized, the dorsal surface of each evenly or irregularly rounded; postvaginal plate prominent, forming a very distinct rounded ridge with smooth edge, antevaginal ridge laterally with a triangular or horn-like process, which is sometimes reduced to a mere tubercle in one of the species.

These Hawkmoths are remarkable for three reasons: (1) the marked sexual dimorphism, (2) the absence of reliable colour and pattern distinctions between the species, and (3) the disturbing fact that in several species the genital armature, though distinct in the ♂♂, does not exhibit any differences in the ♀♀, so that in most species we do not know how to distinguish the ♀♀ and to which ♂♂ to assign them.

The uncertainty referred to under (3) is most unsatisfactory, as is the scantiness of the material in collections. The solution of this feminine question must be relegated to the future, and for the present we have to be satisfied with conclusions based on the male population. In bringing together some of the ♂♂ and ♀♀ I am guided more by locality labels than anything else, and I only hope that the efforts of the Schadchen will not have to be nullified in the divorce court. In these circumstances it is awkward that two of the names have been based on single ♀♀: *pygarga* Karsch 1891 and *convexus* R. & J. 1903. I hope to have assigned to them their right ♂♂, but there remains still some doubt.

I am very much indebted to my friend Dr. B. Preston Clark for the loan of types and other specimens, which have been most valuable for this short survey.

1. *Polyptychus pygarga* Karsch 1891 (text-figs. 1 and 2 ♂).

Originally described from a single ♀ bred by Dr. Paul Preuss at Barombi, Cameroon. The Berlin Museum contains also a ♂, collected by Preuss at Victoria, Cameroon. This specimen, which agrees with *P. spurrelli* R. & J. 1912 in size, colour and markings, I regard as the ♂ of *P. pygarga*. In both this ♂ and that of *P. spurrelli* tergite X gradually narrows to a point, with the apex

curved downwards, the elasper bears a narrow dorsal marginal dentate lobe which projects inward (text-fig. 1), the dorso-apical lobe is large and curved inward, below it, as in the allied species, a short apical lobe directed distad. Penis-sheath (text-fig. 2) with an oblique, somewhat raised, subapical belt of numerous teeth, the belt open on the dorsal side. Penis-funnel dorsally trisinate, the lobes bounding the median sinus denticulate and more or less triangular.—In ♀ the lateral process of the antevaginal plate prominent, more or less triangular or pointed.

P. pygarga and *P. spurrelli* evidently replace each other, the former presumably being confined to the Cameroon-Congo districts, the other to the Senegal-Niger countries, and should therefore be treated as subspecies of one species :

(a) ***P. pygarga pygarga* Karsch 1891.**

♂. Anal tergite longer than in *P. p. spurrelli*, dorso-apical lobe of elasper longer and strongly curved frontad, the tip of the lobe being on a level with the short dorso-marginal lobe (text-fig. 1).—In ♀ the lateral horn of the antevaginal plate drawn out into a spiniform point.

Cameroon.

(b) ***P. pygarga spurrelli* R. & J. 1912.**

♂. Dorso-apical lobe of elasper not curved frontad, but towards the side opposite.—A ♀ in coll. B. Preston Clark from Côte d'Ivoire probably belongs here. Ground-colour vinaceous cinnamon (Ridgway, *Nom. of Colors*, 1886, pl. 4, no. 15); forewing above somewhat shaded with mummy brown, especially at distal margin. Antevaginal lateral horn flattened, with the margins somewhat irregular, subdentate, the apex not spiniform. Tergite VIII deeply incised in middle, the two halves slightly convex, their apices irregularly rounded.

Gold Coast and Ivory Coast.

2. ***Polyptychus serrator* sp. nov. (text-figs. 3 and 4 ♂).**

♂. Differs from *P. pygarga*-♂ only in the genital armature: dorsal margin of elasper dentate, not expanded inward into a narrow lobe; dorso-apical lobe very strongly curved frontad, even more strongly so than in *P. p. pygarga*, and its dorsal and ventral margins dentate, on outside of the curved lobe a groove along ventral margin separating a narrow strip from the convex portion of the lobe (fig. 3 is taken from dorsal side). Penis-sheath (text-fig. 4) with an obliquely longitudinal stripe of teeth, the apical teeth the longest.

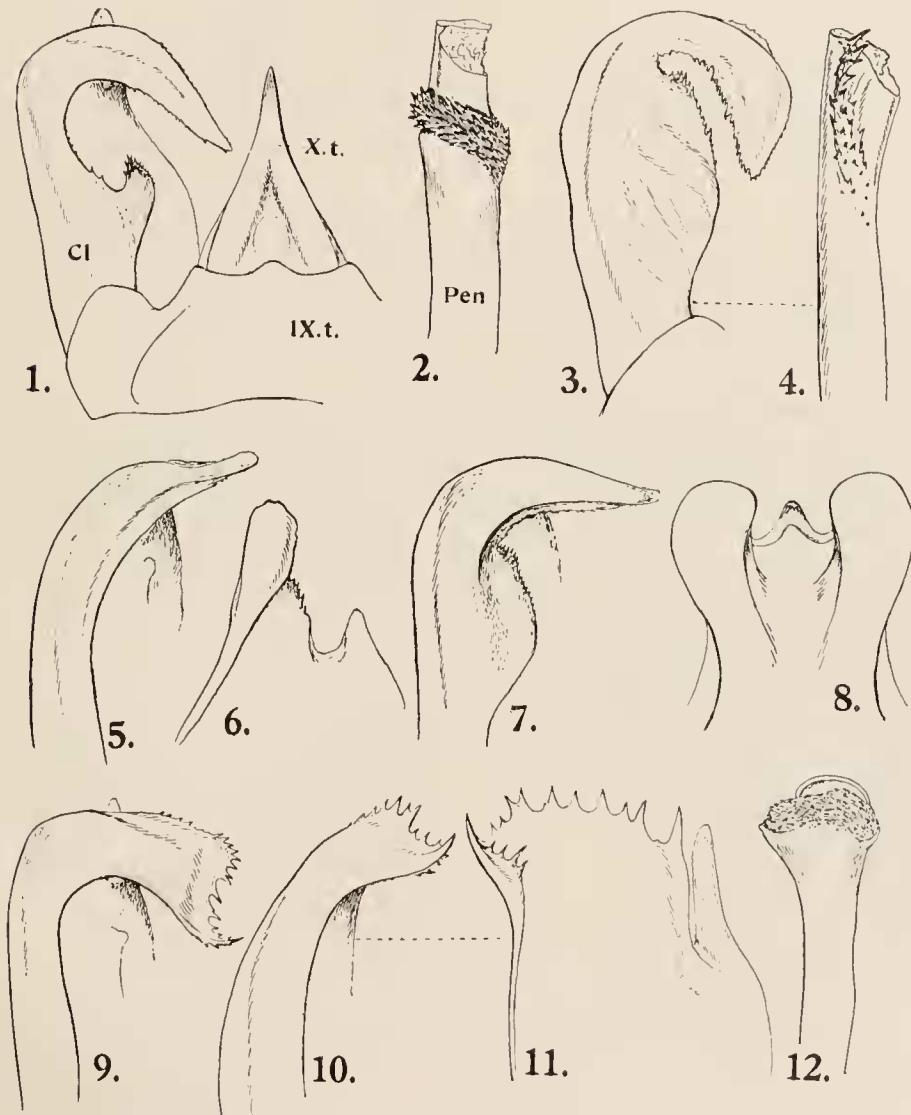
One ♂ in coll. B. Preston Clark from Cameroon.

3. ***Polyptychus prionites* R. & J. 1916 (text-fig. 9 ♂).**

Syn. : *Polyptychus roseola* Clark 1917.

The specimens vary in colouring, some being much more pink than others. Genital armature also individually somewhat variable in detail; the two ♂♂ from Bosum Uam, Spanish Guinea, differ in the genitalia *inter se* rather more than from other specimens. *P. roseola* was based on a pinkish Congo ♂. One of the Bosum Uam ♂♂ is nearly as pink, while the second ♂ from that district (both collected by Tessmann) is almost as dark grey as the type-specimen from Lake Chad district.

♂. Tergite X simple as in *P. pygarga*. Dorsal margin of elasper non-dentate (text-fig. 9), dorso-apical lobe long, curved inward and slightly frontad, its ventral margin strongly dentate, apex suddenly narrowed and somewhat twisted; the denticleate ventral edge of this twisted apieal portion is the continuation of the



inner edge of the dorsal margin of the elasper, this edge extending obliquely across the inner surface of the curved lobe. Penis-sheath with a subapical belt of numerous teeth. Penis-funnel dorsally trisinuate, median sinus the widest.

♀. A specimen from Bosum Uam (Tessmann) in the Berlin Museum is smaller than *P. pygarga*-♀, length of forewing 30 mm. Antevaginal horns with spiniform apex; the halves of tergite VIII strongly convex, rounded, projecting,

the lobes well separated from each other; postvaginal plate very strongly rounded.

I now place here also the damaged ♀ from Agberi mentioned in the Revision under *P. pygarga*; it is much darker than the ♀ from Bosum Uam (which is evidently a bred one).

Lake Tchad: Ht. Chari, type of *P. prionites*.—Nigeria: Agberi.—Spanish Guinea: Bosum Uam.—French Congo: Fort Crampel, type of *P. roseola*.

4. **Polyptychus consimilis** R. & J. 1903 (text-figs. 5, 6, 7 ♂♂).

In both sexes the apex of the forewing a little more produced than in *P. prionites*.

♂. Tergite X simple as in the previous species. Dorso-apical lobe of clasper spatulate, with obtuse, rounded, non-dentate apex, the lobe bent inward (i.e. sagittad), but not frontad. Belt of penis-sheath narrower than in *P. prionites*, and apical, not subapical. Penis-funnel with one dorsal sinus, the other two excisions at most vestigial.—♀ (see under b).

(a) **P. consimilis consimilis** R. & J. 1903 (text-figs. 5, 6 ♂♂).

Syn.: *P. sudanensis* Clark 1927; *P. consimilis belgica* Clark 1926.

♂. Dorsal margin of clasper (text-figs. 5 and 6) not expanded inward; dorso-apical lobe short, quite gradually curved, pointing inward-distad. Penis-funnel with one dorsal sinus.

Sudan: Atbara.—Bahr-el-Ghazel.—Congo Belge.

Types of *P. c. belgica* and *P. c. sudanensis* compared.

(b) **P. consimilis ancyalus** R. & J. 1916 (text-fig. 7 ♂).

♂. Dorsal margin of clasper expanded inward, dorso-apical lobe long, its direction about at right angles to the sagittal plain. Belt of penis-sheath broader than in *P. c. consimilis*. Penis-funnel with indication of dorso-lateral excisions.—♀. Antevaginal lateral process flattened, obtuse; postvaginal plate more broadly rounded than in *P. prionites*; halves of tergite VIII strongly convex, their apical margins irregular, laterally somewhat produced. Length of forewing 30 mm.

Konakry I.—Gold Coast: Gambaga.—French Guinea: Dingiray, a ♀ in coll. B. Preston Clark.

5. **Polyptychus convexus** R. & J. 1903 (text-figs. 10, 11, 12 ♂♂).

P. pygarga convexus R. & J. 1903.

Originally described from a single ♀, which we figured. The specimen is now in the collection of Dr. B. Preston Clark. Dolman obtained in N.W. Rhodesia several ♂♂ and one ♀ which I believe to be *convexus*. These specimens represent a distinct species externally very similar to *P. consimilis* and *P. compar*. Some ♂♂ are much more pink than others, as in the case of *P. consimilis* and *P. prionites*.

♂. Tergite X simple. Dorsal margin of clasper not expanded and not dentate; dorso-apical lobe much broader in a view from inner side (text-fig. 11) than in *P. consimilis*, its distal margin very strongly dentate, the upper angle produced into a sharp triangular process which projects inward-upward and bears dorsally on the inner side some teeth similar to those of the distal margin of clasper;

ventral apical lobe close to upper, narrow, pale, soft. Apex of penis-sheath ventrally soft, somewhat swollen, covered with numerous small teeth, this patch transverse, not extending round to the upperside; within the sheath a flat broad sclerite with rounded apex. Penis-funnel broadly unisinuate dorsally and roundedly emarginate ventrally.

♀. I cannot distinguish the ♀ from that of *P. compar*. Lower half of termen of forewing slightly convex; lateral horn of antevaginal plate flattened, obtuse, shorter than in *P. pygarga*.

North-west Rhodesia.—North-east Rhodesia: South end of L. Tanganyika, Kalambo R.—Congo Belge: M'Pala, shore of L. Tanganyika.

6. **Polyptychus compar** R. & J. 1903 (text-fig. 8 ♂).

♂. Anal tergite on each side with a large wing-like flap which is rounded at apex and projects distad and upward, the median process being curved down; this peculiar structure of tergite X easily visible under the binocular without dissection. Clasper broader than in all previous species, apically feebly chitinized and not divided into two lobes, in its deep cavity a conical tooth about vertical on the inner surface of clasper. Penis-sheath with an apical (not subapical) half-belt of numerous teeth. Penis-funnel ventrally broadly and deeply sinuate, the sinus round, dorsally the funnel short, trisinuate.—♀. A series in B.M. and at Tring. Colour variable in depth of tone. Lobes of tergite VIII flat, feebly convex, rounded at apex. Lateral horn of antevaginal plate variable in length, sometimes reduced to a tubercle, always obtuse. Post-vaginal plate very broadly rounded.

South Rhodesia: Salisbury.—Nyasaland: Mlanje and Zomba.—Tanganyika Territory: Kilosa.